```
"""
Use the link for reference reading
https://blog.ouseful.info/2016/12/29/simple-view-controls-for-pandas-dataframes-using-ipyt

Check this video too if needed to understand from scratch
https://www.youtube.com/watch?v=jWT-HXv0LUQ
"""

import ipywidgets
import numpy as np
import matplotlib.pyplot as plt
import pandas as pd


from google.colab import files
uploaded = files.upload()
```

Choose Files Student_Marks.csv

- **Student_Marks.csv**(text/csv) - 2419 bytes, last modified: 10/11/2022 - 100% done

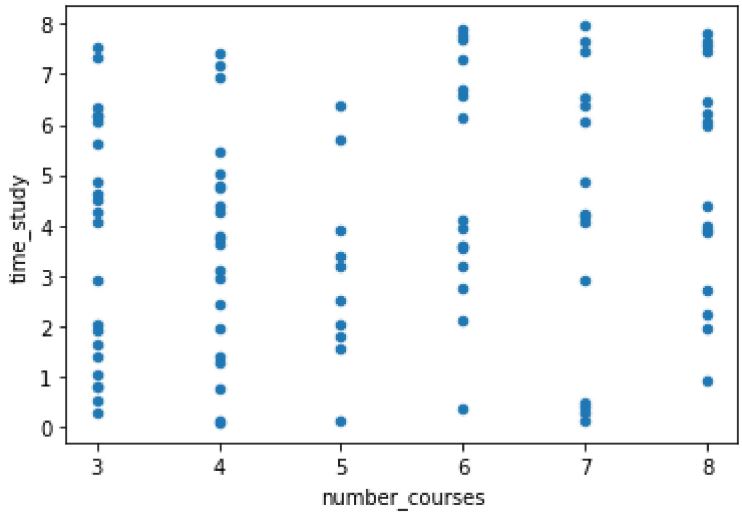
```
Saving Student_Marks.csv to Student_Marks (3).csv
```

```
import io
df = pd.read_csv(io.BytesIO(uploaded['Student_Marks.csv']))
df
```

	number_courses	time_study	Marks	Gender	Division
0	3	4.508	19.202	Male	B
1	4	0.096	7.734	Female	D
2	4	3.133	13.811	Female	C
3	6	7.909	53.018	Female	C
4	8	7.811	55.299	Male	A
...	...	...	...	...	...
95	6	3.561	19.128	Male	B
96	3	0.301	5.609	Female	A
97	4	7.163	41.444	Female	D
98	7	0.309	12.027	Male	A
99	3	6.335	32.357	Male	D

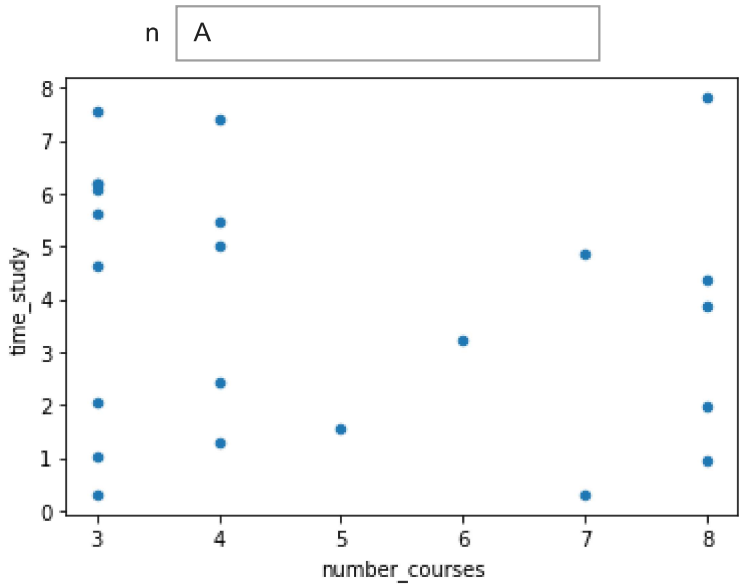
100 rows × 5 columns

```
#Just an example how to plot with panda dataframe
df.plot(x='number_courses', y='time_study', kind='scatter')
plt.show()
```



See this one, we can interact using String values, I have kept only one parameter, for better understanding.

```
def something(n='A'):
  adi = df[df['Division']==n]
  adi.plot(x='number_courses', y='time_study', kind='scatter')
  plt.show()

#plt.show() is not mandatory, but for safety
ipywidgets.interact(something, something=['A','B','D','C'])
```

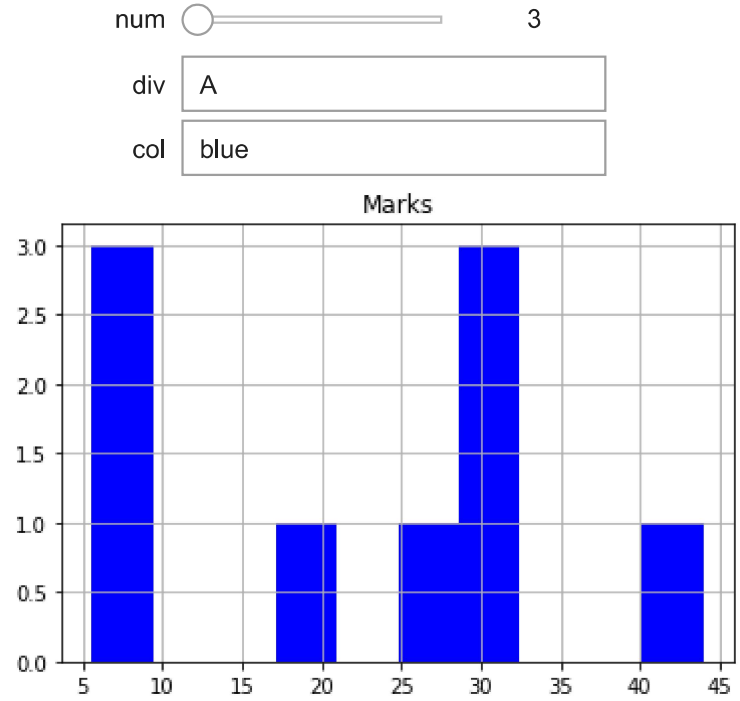



```
<function __main__.something(n='A')>
```

See the examples below for more parameters

```
#num = number of courses
#div =divisions
def histo(num=3,div='A',col='blue'):
  adi = df[(df['Division']==div) & (df['number_courses']==num)]
  adi.hist('Marks', color=col)
  plt.show()
```

```
#plt.show() is not mandatory, but for safety

ipywidgets.interact(histo, num=(3,7,1) ,div=['A','B','D','C'], col = ['blue','yellow','gre
```




```
<function __main__.histo(num=3, div='A', col='blue')>
```

```
#df[(df['Division']=='A') & (df['number_courses']==3)].head()
#df['number_courses'].unique()
#df.hist(column='number_courses')
```

Adding slider and checkbox just in case :)

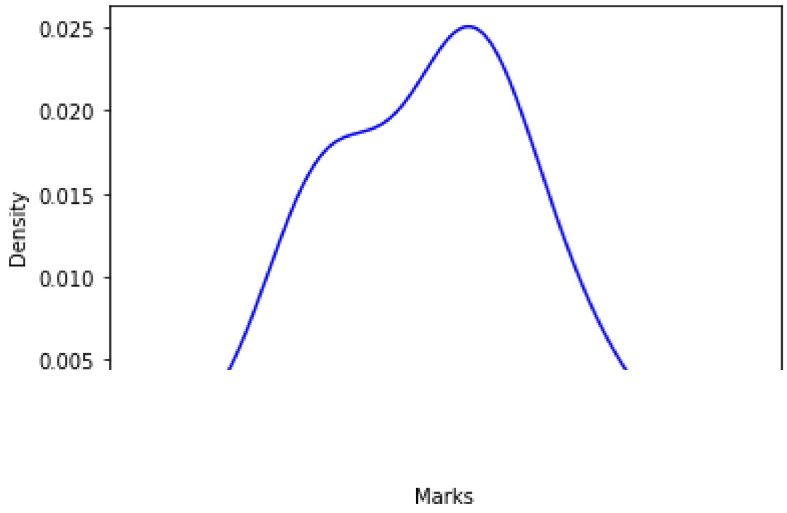
```
import warnings
warnings.filterwarnings("ignore")
import seaborn as sns


def histo(num=3,div='A',col='blue', show_line= False):
  adi = df[(df['Division']==div) & (df['number_courses']==num)]
  if show_line:
    sns.distplot(a=adi.Marks, hist=True,color=col)
  else:
    sns.distplot(a=adi.Marks, hist=False,color=col)
#plt.show() is not mandatory, but for safety

ipywidgets.interact(histo, num=(3,7,1) ,div=['A','B','D','C'], col = ['blue','yellow','gre
```

num 3

div A

col blue

show_line




```
<function __main__.histo(num=3, div='A', col='blue', show_line=False)>
```